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ABSTRACT

The booklet presents a description and illustrates, with photographs, the Eskimo lifestyle and the kinds of activities that occur at a summer fish camp on the Yukon River. Eleven suggested activities are listed for the teacher to present when using the booklet. Activities include studying the map of Alaska; tracing the life cycle of the fish; taking the students fishing; studying parts of the body of the fish; discussing the importance of fish management; figuring the cost of a set of gear for commercial fishing and comparing that to subsistence fishing gear; figuring the cost of supplies to feed a family for eight weeks of summer camping; writing about the student's own experience with summer fish camp; and writing favorite fish recipes and ways to fix greens or berries collected during summer camping. (ERB)

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SUMMER FISH CAMP

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Jimmy Paukan	for his great sense of humor and for making us feel very welcome at his fish camp
Andrew Paukan, Mary Paukan and their children	for being the generous cooperative participants who did all the work that made this booklet and its accompanying film possible
Flora Paukan and Agnes Paukan	for their patience with our requests to repeat different steps in the fish cutting process time and time again
Louie Paukan	for assisting in the drift netting process
Boreal Fisheries	for allowing us to take some of the shots at the loading dock
St. Mary's Mission	for the delicious meals and the quiet warm place where we could get a good night's rest
Mary L. Pope	for typesetting and finalizing the material for this book

It was because of the assistance of these people that we were able to gather the materials for this book and the short film on Summer Fish Camp. Hopefully, all those who will read this book will come to appreciate the contributions made by these people to our getting a better understanding of the most important activity that goes on in a typical summer fish camp in Alaska; that of catching fish, not only for commercial purposes, but for the more important reason of basic subsistence.

Dennis Remick
Tupou L. Pulu

NOTE TO TEACHERS

The following suggestions are made with the hope that you will be able to add them to other kinds of activities that you will use with your students when you read this book about summer fish camp on the Yukon River:

1. Take a large map of Alaska and put it up on the wall. Have your students follow the course of the Yukon beginning with its mouth at the Bering Sea and going all the way into Teslin Lake in Canada. Learn the names of the villages on the banks of the Yukon and its tributaries. Make a special stop at St. Mary's which is the site of the fish camp featured in this book.
2. Place together contiguous segments of geological survey maps of your area which can be purchased very cheaply from the U.S. Geological Survey Office in Anchorage. After this is done, have the students write the name of their fish camp (use the Native names if they are known) on that map. Play a game to see if everyone can name all the fish camps on the main rivers and sloughs by their village.
3. Make a bulletin board to show the life cycle of each of the fish that is caught in your local area. Information on most fish species in the bush are available from the Alaska State Department of Fish and Game in Anchorage.
4. If there is any fishing going on during the late fall or through the ice in winter, take your students fishing. After catching the fish, save a few to be studied in school. Do some of the following activities with the fish:
   a. Name all its parts and examine the scales and the fins
   b. Demonstrate the proper way to cut the fish for hanging, or for cooking
   c. Show the bone structure and all the internal organs, and examine the gills and the contents of the stomach
   d. Make a fish print
   e. Prepare the fish for the students to eat, or bring dried fish from home for serving to the kids as a treat at the end of this activity.
5. Write many cards each containing one specific fact about a fish that is caught in your local area. For example, one card can say, "The largest type of salmon which may weigh over 100 pounds." Another card may say, "Another name for a king salmon," or "This fish dies after spawning." As you can see from the facts given, one fact might apply only to one fish, and another might be true for a number of fish like the last fact given in the previous sentence. After the cards are made, cut them into fish shapes and attach a paper clip to the mouth of each fish. Place these cards behind a screen or a large box so the students cannot look behind it easily. Take a stick and tie a string to one end like a line coming off a reel, and attach a small magnet on the end of the string. Let each

student throw the fishing line behind the screen and try to catch a fish card. When he brings one up, have him read the fact to the students. Then he identifies the fish that matches the fish fact on the card. If he can identify the fish successfully, he can keep the fish and fishes for another card. If he cannot name the fish let one of the other students identify the fish. A correct identification makes him the new fisherman. Have him continue fishing until he loses his turn. One way to vary this is to have fishing partners. One can do the fishing and the other can identify the fish. If he cannot do it, they lose their turn to another fishing team. Use other variations of this method with your students.

6. Discuss the importance of fish management to the continued success of commercial fishing and subsistence fishing.
7. Figure the cost of buying a new set of gear for commercial fishing and compare that to subsistence fishing gear.
8. Have students figure out how much fish should be caught for the subsistence of different family sizes during four to six months of the winter season.
9. Figure the cost of supplies that will be needed to feed six people for eight weeks of summer camping. Have the students make an inventory of all the things that will be needed and figure out what will be consumed for at least two main meals at camp.
10. Have the students write about their own experience with summer fish camp. Encourage them to use drawings, or actual pictures, to illustrate their stories. Display these stories for everyone to read and enjoy.
11. Have the students write their favorite fish recipes, and ways to fix greens, or berries that are collected during summer camping. Put these into a hand-made book for students to share with their friends and their parents.

SUMMER FISH CAMP

My name is Jimmy Paukan. I spend every summer in this fish camp. I thank you for taking pictures that will be shared with other people.

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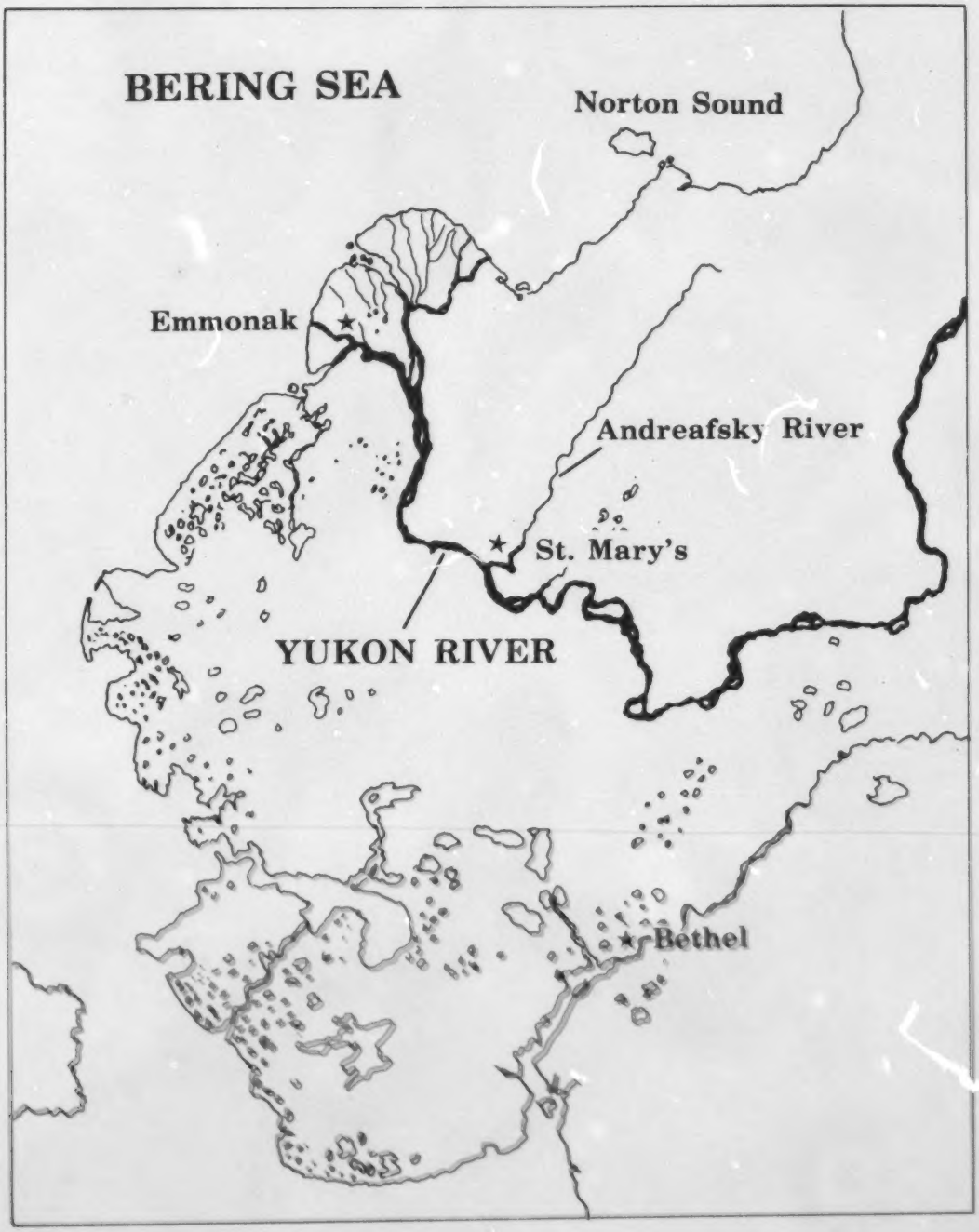
BERING SEA
Norton Sound
Emmonak
Andreafsky River
St. Mary's
YUKON RIVER
Bethel

St. Mary's is a First Class Alaskan city tucked away on beautiful rolling hills three miles up from the Yukon River on the banks of the Andreafsky tributary. The decision to establish St. Mary's at its present location was closely tied to the early movements of the Catholic Mission. The Catholic Mission first moved from the coastal village of Kanelik to Akulurak in 1910 mainly in search of higher ground. Then it was moved to its present site in 1949 when Akulurak became increasingly inaccessible due to the silting of the channel.

At first, only the Jesuit priests, the Ursline sisters and their school children, were in the newly established village of St. Mary's. In 1952, however, people like Jimmy Paukan, and later Billy Beans, brought their families to stay permanently in St. Mary's. Their move was prompted by a desire to give their children a chance of gaining an education. Other families followed and now St. Mary's boasts a population of 450, 80% Eskimo and 20% white, all working together to make St. Mary's a better place in which to live.

For most people in St. Mary's, winter is a time for staying close to the village. Summer, on the other hand, spells freedom and the opportunity to participate in the various exciting activities of summer fish camp.

Immediately after break-up, during the last week of May, Andrew Paukan, one of Jimmy Paukan's sons, begins packing. He and his family prepare all of their gear for a move to the Paukan fish camp. Summer clothes, bedding and fishing gear are taken out of storage. Food is bought and boxed. Then, with eager children helping, all is loaded aboard the family skiff for that first seven-mile trip downriver to the Paukan fish camp. Other families in St. Mary's, as well as in other villages along the Yukon, engage in similar activities year after year.

Here at the summer fish camp, Andy's family live together in a twelve by fourteen-foot canvas wall tent. The

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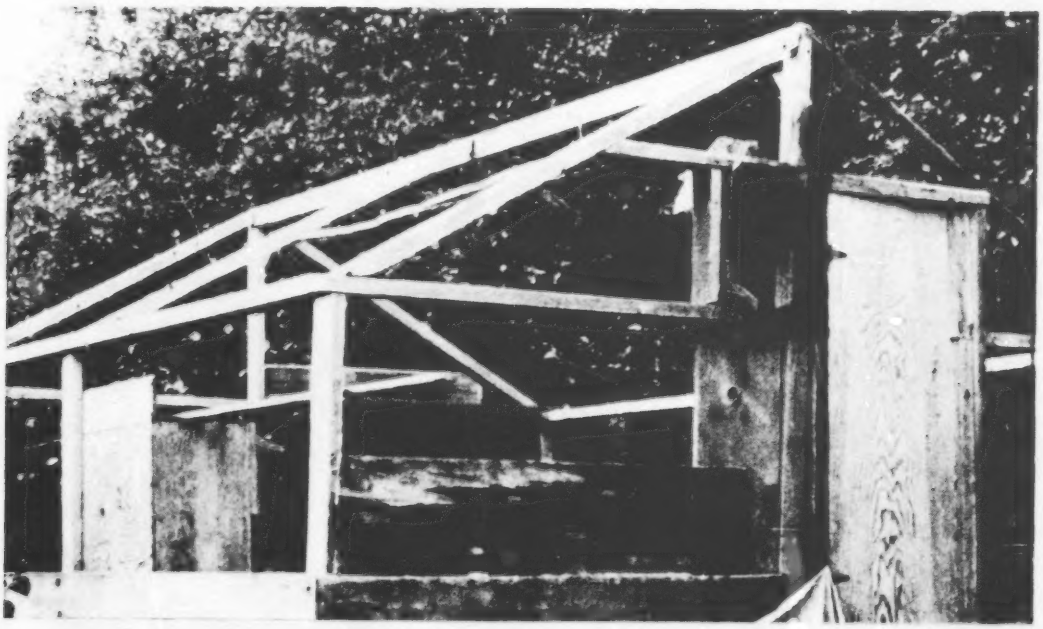
tent is stretched over a permanent two by four stud frame and then tacked down. Visqueen is pulled over the tent to keep it dry during rainy spells.

To keep the tent at a comfortable temperature, the Paukans set up a small cast iron box stove in one corner and run the stove pipe up through a hole cut in the canvas and plastic. This stove also provides the energy for cooking and heating water for coffee.

Other things are done to complete the setting up of the camp: metal folding beds are opened, tables and chairs are brought in, and food is unpacked and put away on the shelves. Storing away all the necessities in a small tent that is also going to house two adults and seven children is a skill that could only have been improved with years



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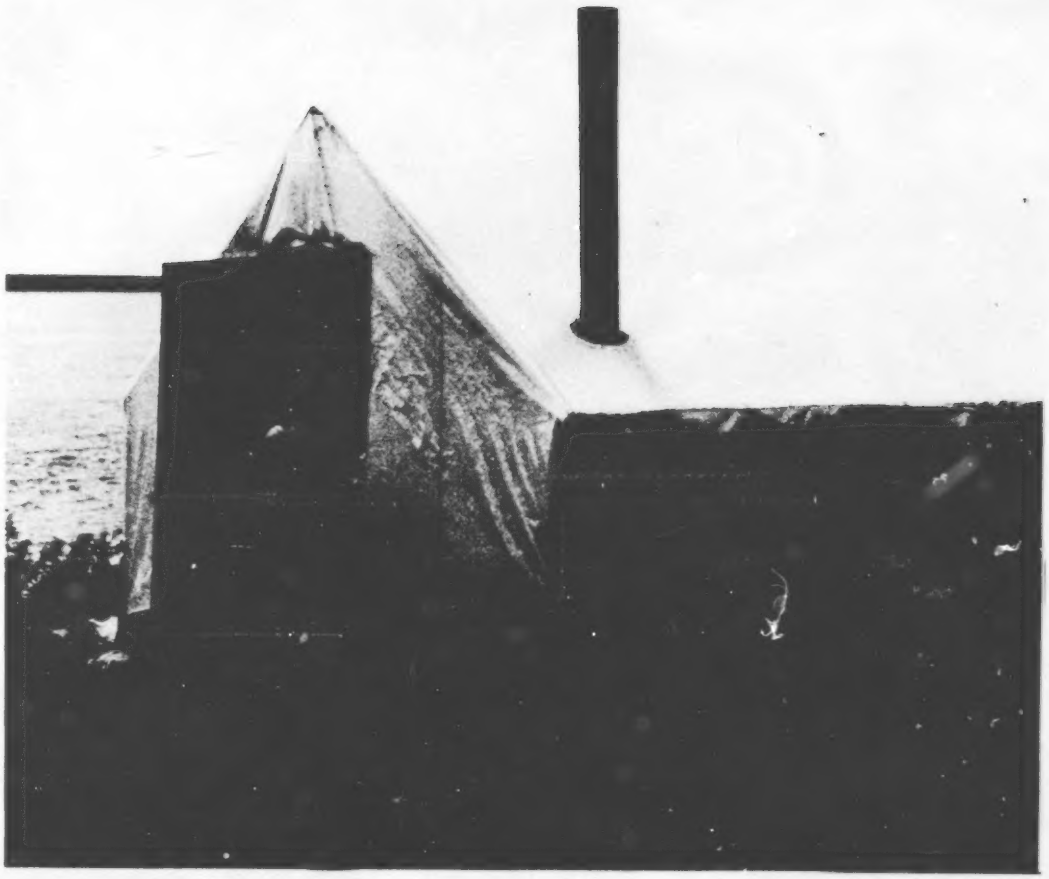

of practice.

Water for cooking and drinking is obtained from a small stream a few yards behind the camp, or from a spring directly above the camp on the side of the hill. Clothes are taken back to St. Mary's to be washed once a week in the electric washing machine. After they are washed, they are taken back and hung up in camp on lines stretched between the willow trees.

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While the tent is put in order by Andy's wife, Mary, and their children, Andy and his brother, Louie, are looking into the condition of their fish net. They stretch the drift net and examine it for any damage or rot that might have occured during its winter storage. If there is any mending to be done, they will do it before the net is taken out for fishing. At this time, they also cut the wood they will use for smoking their subsistence catch: willow, alder and birch. They saw and split the logs into manageable lengths, usually from eighteen to twenty-four inches long.

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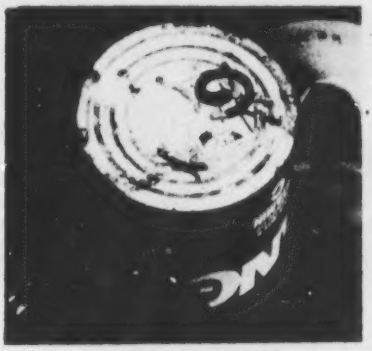
As the opening of the salmon fishing season nears, other Paukan families and their relatives arrive and set up their tents for a long stay at the fish camp. Soon the bank of the river begins to look like a small village. Here, the extended family is close once more.

Summer camp is the time to get away from the confines of the village and the grip of the long winter months. It is the time for the children to have fun all day in the warm sun; for T-shirts and suntans, but most importantly, it is the time for catching and preserving the winter's supply of salmon and other fish.

Later on in the summer, there are abundant patches of salmon berries, blueberries, low bush cranberries, and black berries near the camp that will be picked. Some of these will be eaten fresh. Some will be made into preserves. Some will be frozen, and a large number, especially the black berries, blueberries, and cranberries, will be stored for



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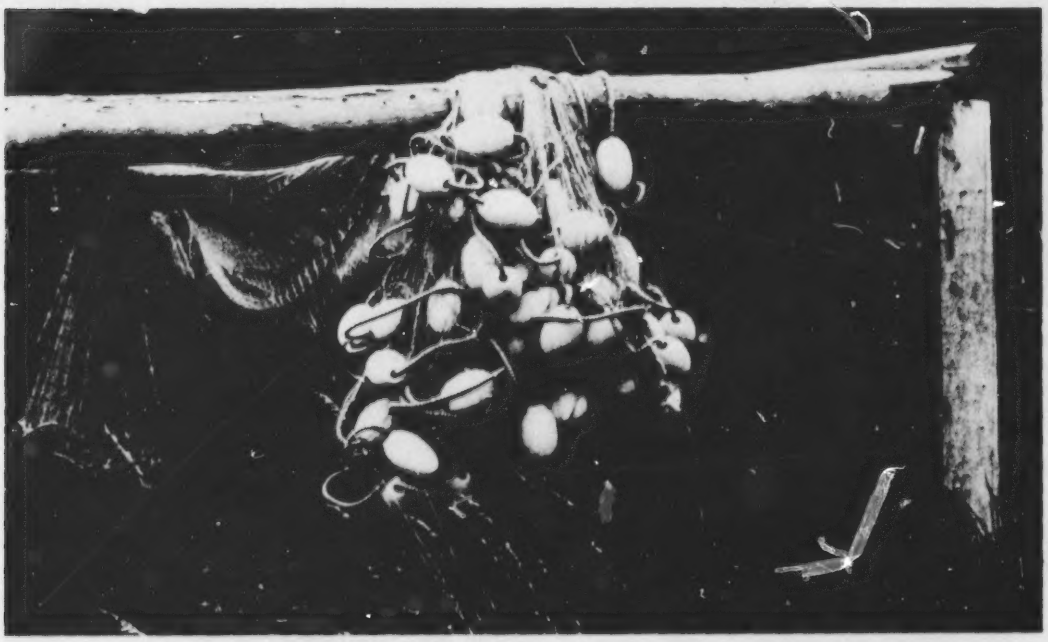
making the mouthwatering Eskimo ice cream called akuutaq.

With everything in its proper place in summer fish camp, Andy's family will settle down into a two-month routine that centers around the enjoyment of the warm summer days and the fishing. Nothing much will disturb the peace of summer fish camp.



The first part of June brings the magnificent king salmon on their spawning run up the Yukon from the icy Bering Sea. Some will travel as far as Lake Teslin in Canada, a long arduous journey of over 2,400 miles. Some will make it, and others will be caught by fisher-

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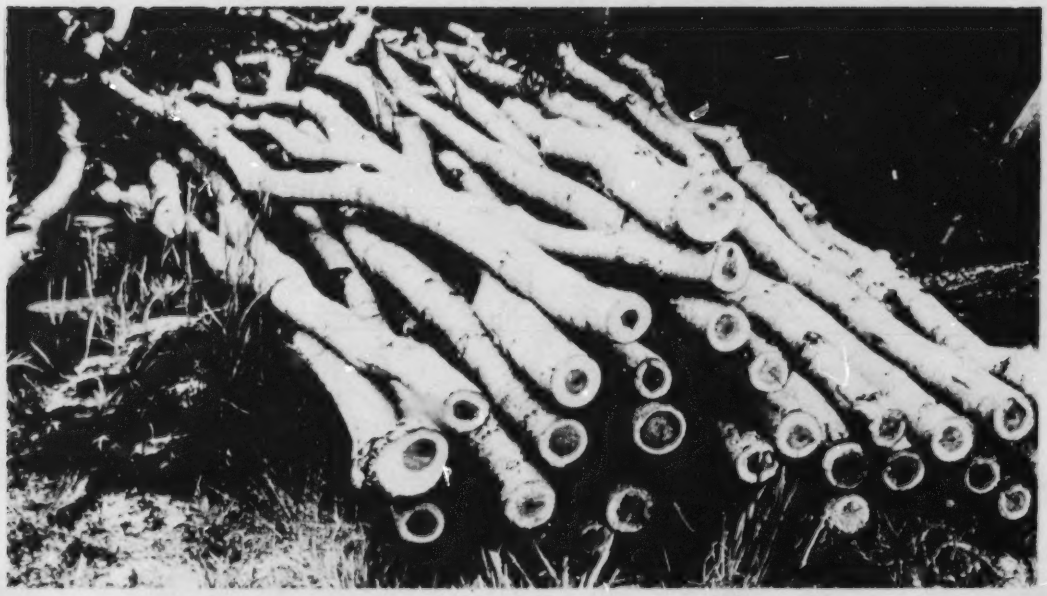
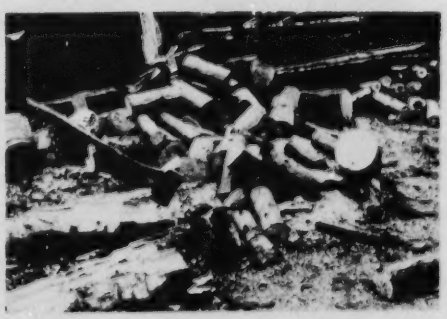


men along their route. These silver grey fish, when caught in the Yukon River, have an average weight of twenty-five to thirty pounds. Their average length at the same time is twenty-four to thirty inches. Their flesh is a pale orange-red, and it is moist and sweet. Their flavor is prized around the world, and for this reason, they bring in the best price from the fish buyers. During the 1981 fishing season, the fishermen negotiated a price of $1.10 per pound for their kings.



Mixed-in with the kings later in June are the summer chums. By late July, the kings drop off and the runs are

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composed mainly of chums, or dog salmon, and pink, or humpback salmon. The silvers are caught in large numbers during August. Then in the fall there is another run of chums.

The beginning of the second week in June sees the first day of salmon fishing. For the commercial fishermen, there are two twenty-four hour fishing periods a week like from six o'clock Sunday evening to six o'clock Monday evening, and from six o'clock Wednesday evening to six o'clock Thursday evening.

The opening and closing periods are established by the

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Alaska Department of Fish and Game. Their stated objective is to "manage the various salmon runs on an optimum sustained yield basis after providing for spawning and subsistence utilization requirements." Because of the conditions of Yukon fishing (its vast size and turbid water) accurate estimates of escapements (those fish not caught) are nearly impossible. So decisions about openings and closings are based on "catch data", the information reported by the fishermen and fish buyers about the fish they have caught.

An interesting note: The first commercial salmon harvest in Alaska was in 1918 at Andreafsky—the present day St. Mary's.

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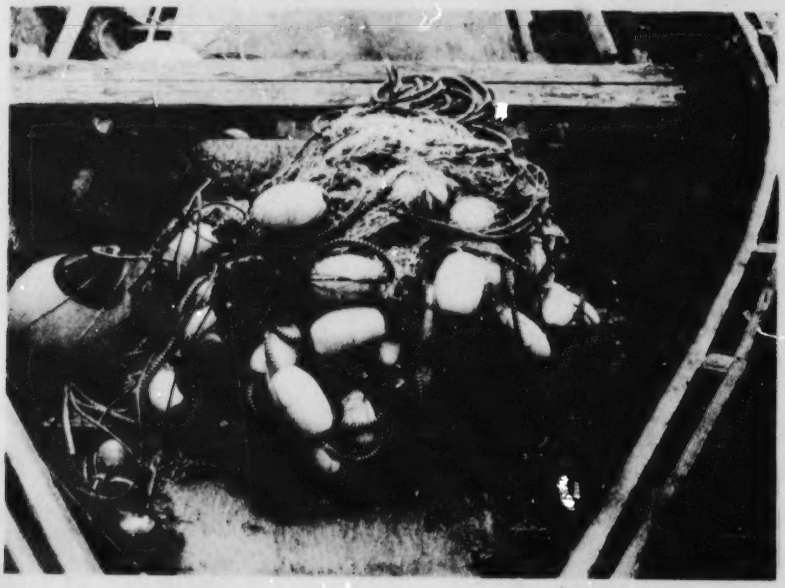
Andy fishes commercially with his younger brother, Louie. They fish in a wooden skiff that is twenty feet long and five feet wide at the beam. The skiff has a draft of about three inches. Its flat bottom makes a very stable platform to work from while drifting in the easy flowing current of the Yukon River. The skiff can manage a load of approximately 1,500 pounds. Its design is very ade-



quate for river work, and boats of similar construction are commonly seen on the Yukon and other Alaskan rivers.

The drift net that Andy and Louie load into the skiff is made commercially of nylon and it is fifty fathoms long and three fathoms deep. Its mesh size is 8 1/4 inches, the legal mesh for king salmon. The net is usually bought from one of the fish buyers, or from Donaldson's fishing

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supply store in Anchorage. Already hung with lines, floats, and sinkers, the price of the net varies between $800 and $1,200, depending on the size and quality. With proper care and no unforeseen entanglements with hidden snags buried firmly in the muddy bottom of the River, the net should last three fishing seasons.

Andy has two outboard motors on his boat, a 35-horsepower to get him to and from the fishing site, and a small 5-horsepower that is used during the drift, and as a spare

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if the larger motor should quit. To hold the fish they catch, they load a large wooden bin into the boat amidship. With two five-gallon cans of gas-oil mixture, the motors, life preservers, rain pants, rubber gloves, lunch, and a couple of thermos bottles of fresh coffee, the two men are well equiped and ready to start out on the river.

The starting point for their drift set is approximately two miles upriver. The kind of fishing they will be doing is called drift netting. Basically, it is a gill net tied to the bow of the skiff with a float on its other end, and then it is allowed to drift with the current.

When the men reach the fishing site, they switch off the large motor and start the small one. With this motor running in reverse, pulling away from the float which is attached to the end of the net that is already in the water, they pay out the net, stretching it across the flow of the river. When the net is completely out, the drifting begins.

The small motor is kept running throughout the drift as this keeps a constant tension on the net. This tensioning keeps the net open and in the proper position, perpendicular to the current. When the situation demands, such as when it is necessary to put the net in a new position, or to pull it away from a snag lurking below the dark river surface, they will switch pulling ends.

Many of the snags have been in place for years. Both Andy and Louie know their location from memory. It is the new ones, however, that the men must constantly keep a lookout for. This is a difficult task because of the turbidity of the river. Another danger also lies in old snags which may have been freed and shifted to new

locations since the previous summer's fishing drifts. A wrong move could mean a torn or lost net.

Once the net is set, Andy and Louie drift slowly in the warm sun.

Now and then they check for the telltale bobbing of the floats that signal tangled fish in their net. It is easy for the men to settle into a relaxed and languid frame of mind while the strong and steady flow of the Yukon current propels them along. The shore's passing is barely perceptible. Over the drone of the small outboard, the men can catch bits and pieces of the fishermen's conversations in the other boats, or from the inhabitants of camps along the river.

When they have drifted about two miles below their own fish camp, the net is hauled in. Louie holds the boat steady while Andy does the pulling. They will alternate holding and pulling until

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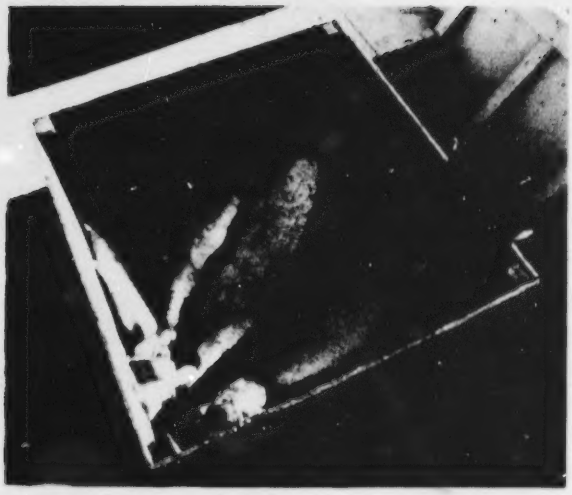

the fishing period closes.

Each fish is untangled from the net as it comes up from the river. If it thrashes around in the boat, it is hit on the head with a wooden gaff handle. When the net is in the boat, they start the 35-horse power motor, and after a fast run upriver, they repeat the drift net process once more. Sometimes they catch as many as fifty fish in one set. They will go on catching fish, however, until they feel they have enough to deliver a load to one of the buyers.

The closest fish buyer to Andy and Louie is Boreal Fisheries right next door to their fish camp. At the buying dock, the fish are unloaded into a bin that is attached to a scale. The weight is noted by one of the Boreal workers and the fish are dumped into a small tram. The tram, in turn, is pulled up a rail to the packing plant directly above the dock. There they are hosed down and packed into plastic crates. Then they are trucked to the St. Mary's airport located about two miles away for a flight to Anchorage. In Anchorage, the fish are processed by Whitney-Fidelgo, then shipped to Seattle for distribution to other world markets.

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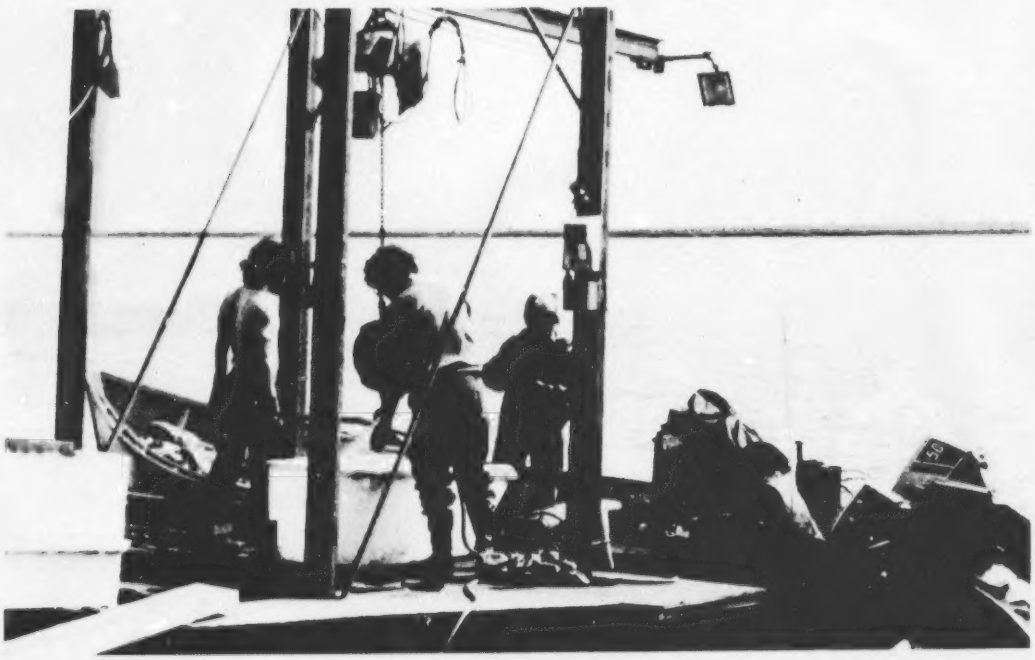
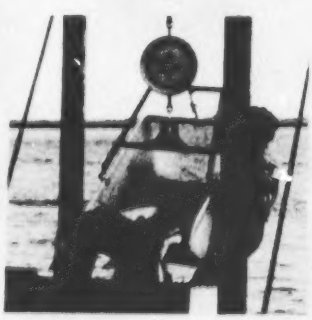


Some fishermen, during the fishing period, avoid an extra trip to their fish camps, or to St. Mary's, by taking advantage of the gas service offered at the buyer's. There they fill up their gas tanks and visit with their friends who come to deliver fish at the same time. There is always a lively group gathering at the dock.



Andy and Louie, like the other fishermen, collect their money and return to the river. Since their access to the salmon is limited to the two twenty-four hour fishing periods per week, they want to spend as

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much time fishing as they possibly can. In a good season, they might land 8,000 salmon. So the men will fish until the fishing period is closed, and the last fish are sold. Only then will they return to camp to make up for their loss of sleep and to allow their aching muscles to recover before the next fishing period.

Not all the fish that Andy and Louie catch will be sold commercially. Some will be dried and smoked. This is their subsistence catch. Andy's family usually smokes three hundred fish in the summer. This fish, plus at least five frozen kings, some twenty frozen silvers, and other meat will last Andy's family most of the winter. Fresh fish for Andy's family is also caught in winter by gill netting under the ice. These fish include pike, ling cod, and whitefish.

The fish that are brought to the Paukan fish camp are prepared by the women for immediate use, or for drying and smoking. All the women in the extended family that are old enough to help with the fish preparation will do so. Andy's wife, Mary, his sister-in-

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law, Flora, his mother, Agnes, and his two daughters all work together.

The women start by removing the head and viscera of the fish with their uluaqs. The heads are placed in one tub. The viscera go into another. After this is done, the excess blood and the kidneys are cleaned from the body cavity. Then the women slit the fish along the back bone and fillet the meat from the back bone and ribs leaving the tail still attached to the fillets. The back bone is cut off and put aside. The fillet is then turned meat side out and horizontal slits are made about an inch and a half apart the length of the fillets. After the slits are made,

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the fillet is stretched causing the slits to open. This is done to assure faster, more uniform drying of the meat. Now the fish are collected in a bin where they will wait until they are hung.

The back bones still have considerable meat on them,

so they are slit, then tied together in pairs by the tail ends with twine. They, too, are temporarily stored in the collecting bin until they are hung over the drying rack.

The drying rack is a simple pole structure with several horizontal poles placed parallel to each other widthwise about six feet off the ground. This is covered over by a canvas tarp. The canvas keeps the moisture and direct sunlight off the drying fish.

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Counter clockwise from the upper right: First the salmon is slit from the anal fin to the tail and then along the back to the tail. The meat is filleted from the backbone and ribs leaving the tail attached to the fillets. The backbone is cut off and put aside.

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Counter clockwise from the upper left: The fillet is turned meat side out and horizontal slits are made about an inch and a half apart the length of the fillets. The fillet is stretched. This is done to assure faster, more uniform drying.

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Right: The backbones, which have considerable meat on them, are also slit horizontally, notched, then tied in pairs by the tail to be hung with the fillets.

Left: The fillets are hung meat side cut for two to three days depending on the weather. After the three-day drying they are smoked in a "cool" smoke of green willow and alder for three weeks.

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After all the cutting of the fish is done, the women carry several fish by their tails in both hands and hang them over the poles flesh side out. They let them dry for two to three days depending on the weather before they are transferred to the smokehouse.

The fish are smoked for three weeks with a "cool" smoke from green willow and some alder. The fish must be completely dried; otherwise, they will sour and become moldy during storage. When cured, the smoked fish is stored in the family cache in town for winter consumption. This work occupies a good part of the women's time in summer fish camp.

Not all the time in camp, however, is spent working. Summer is also the time when many people travel in the bush. Friends from other villages on the river such as Pilot Station about twenty-five miles upriver, drop by from time to time for a little visit. Others come from Bethel, Emmonak, or as far away as Anchorage. They come by river boats, barges, or by the small planes from

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nearby places. Wien Air Alaska flies three direct flights a week from Anchorage and six flights a week via Bethel bringing in more people from places further away. Some visitors are lucky enough to visit the Paukan fish camp.

We were at the Paukan fish Camp just in time one day for a typical summer fish camp lunch. While Tupou was sharing the phtotgraphs that she had taken of the last St. Mary's potlatch with Pilot Station with the children, Mary began preparing the food. In a little while, the tempting aroma of fried salmon fillets began to fill the tent. She also cut fish heads in half and boiled them for fish head soup. That, too, was giving off an inviting smell as the soft cartilages of the bones and the delicious meat on the cheeks began to separate from the hard bones of the heads. Soon everything was ready. Mary served the fish with freshly baked bread and crunchy vegetables which we brought from Anchorage. We polished off everything with the unforgettable taste of Andy's pickled fish which was prepared in the following way:

1. Cut into one-inch cubes the meat from one salmon
2. Mix the following ingredients and put them into a gallon jug:
   - 2 cups of water
   - 2 tbs. of pickling spice
   - 1 medium onion - diced
   - 3/4 to 2 cups sugar - depending on one's preference

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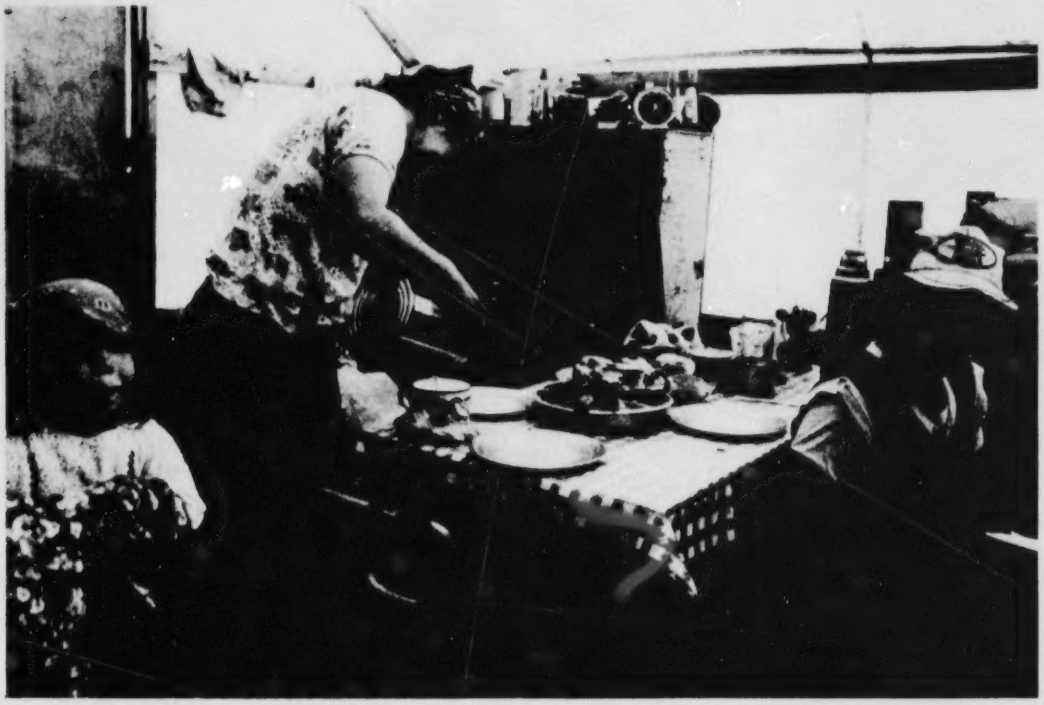
3. Add the salmon cubes to the pickling juice
4. Allow the mixture to sit in a cool place for three to four days before eating



We were hoping that Andy would invite us to spend the rest of the summer in camp with them, but after he saw how much we ate, he changed his mind. He couldn't afford to have us around for very long. So it was with great reluctance that we left the summer fish camp with the hope of returning some day to experience once again the hospitality of the Eskimo people as they engage whole heartedly in their age old tradition of fishing at summer fish camp.

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